



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,485	11/13/2001	Michael J. Comb	CST-138 CIP2	4101
31012	7590	07/14/2005	EXAMINER	
JAMES GREGORY CULLEM, ESQ. INTELLECTUAL PROPERTY COUNSEL CELL SIGNALING TECHNOLOGY, INC. 166B CUMMINGS CENTER BEVERLY, MA 01915			CANELLA, KAREN A	
			ART UNIT	PAPER NUMBER
			1643	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,485

Applicant(s)

COMB ET AL.

Examiner

Karen A. Canella

Art Unit

1643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 2-4, 11-16, 21 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2-4, 11-16 is/are allowed.
- 6) ☐ Claim(s) 21 and 23-25 is/are rejected.
- 7) ☐ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/21/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

1. Claims 11-13, 21 and 23-25 have been amended. Claims 1-4 and 11-45 are pending. Claims 1, 17-20, 22 and 27-45 remain withdrawn from consideration. Claims 2-4, 11-16, 21 and 23-26 are under consideration.

2. Sections of title 35, U.S. Code not found in this action can be found in a previous action.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 21 and 23-25 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 21 has been amended to recite "non-homologous" peptides or proteins within an organism. While the instant specification supports said antibodies which do bind to non-homologous peptides, the amendment excludes antibodies which bind to homologous peptides and the specification as claims as filed do not contemplate such exclusion.

4. Claims 21 and 23-25 rejected under 35 U.S.C. 102(b) as being anticipated by Glenney et al (Journal of Immunological Methods, 1988, Vol. 109, pp. 277-285).

Claim 21 is drawn to a motif-specific context independent antibody that specifically binds a recurring phosphorylated motif consisting of (I two to six invariant amino acids including at least one phosphorylated amino acid, and optionally one or more degenerate amino acids, said antibody specifically binding said motif in a plurality of non-homologous peptides or proteins within an organism. Claim 23 is drawn in part to the antibody of claim 21 wherein said motif consists of part of a kinase consensus substrate motif or a protein-protein binding motif.

Art Unit: 1643

Claims 24 and 25 embody the antibody of claim 2 listing various consensus substrate motifs, however due to the language of claim 23, the substrate motif need not be present as a whole within the motif of claim 23. When given the broadest reasonable interpretation, claims 24 and 25 read on a motif having only a single amino acid from the listed substrates, which includes a single phosphorylated amino acid.

Glenney et al disclose a monoclonal antibody that binds to phosphotyrosine in a multitude of proteins wherein said binding can be competed by free phosphotyrosine (page 281, first column, lines 7-18). Because the antibody can recognize free phosphotyrosine it is concluded that it recognizes phosphotyrosine within a peptide chain in a context-independent manner and thus fulfills the specific embodiments of the claims.

5. Claim 21 requires that the motif consist of at least two invariant amino acids. No degenerate amino acids are required within said motif, and at least one of the invariant amino acids must be phosphorylated. However, it appears from the specification that the portion of the motif recognized by the antibody does not require recognition of the second non-phosphorylated amino acid. For instance, on page 33, lines 12-17 it is stated

Phospho-specific antibodies that react with any protein containing phosphorylated threonine residues, i.e that bind phosphothreonine independently of the surrounding amino acids, were obtained by synthesizing a highly degenerate peptide library XXXXXXThrXXXXXXC where X=all 20 amino acids except cysteine and phosphothreonine.

Thus the antibody which was produced was not restricted by recognition of the second invariant amino acid, specifically the terminal "C" residue which was used as a linker for attachment of the peptide to a solid support (page 16, lines 7-9). It is concluded that the antibody of Glenney et al meets the specific embodiments of the claims, since it is not required that the antibody react with an invariant residue which is a cysteine placed seven amino acids distant from the phosphorylated amino acid.

Art Unit: 1643

6. All other rejections and objections as set forth in the previous Office action are withdrawn in light of applicants arguments and terminal disclaimer.

7. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen A. Canella whose telephone number is (571)272-0828. The examiner can normally be reached on 11 am to 10 pm, except Wed, Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on (571)272-0832. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karen A. Canella, Ph.D.

7/11/2005


KARENA CANELLA PH.D
PRINCIPAL EXAMINER